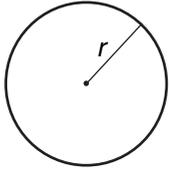


Geometría

Matemática aplicada II

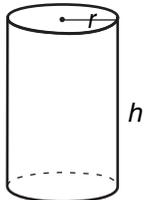
Hoja de referencia

Círculo



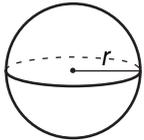
$\text{Área} = \pi r^2$
 $\text{Circunferencia} = 2\pi r$
 $\text{Circunferencia} = \pi d$

Cilindro



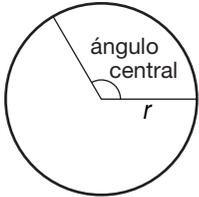
$\text{Volumen} = \pi r^2 h$
 $\text{Área de superficie} = 2\pi r^2 + 2\pi r h$

Esfera



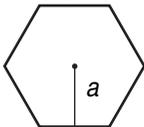
$\text{Volumen} = \frac{4}{3}\pi r^3$
 $\text{Área de superficie} = 4\pi r^2$

Sector del círculo



$\text{Largo del arco} = \frac{\text{circunferencia} \times \text{ángulo central}}{360^\circ}$
 $\text{Área del sector} = \frac{\text{área total} \times \text{ángulo central}}{360^\circ}$

Polígono regular

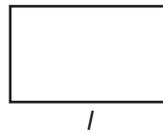


$\text{Área} = \frac{1}{2} \text{perímetro} \cdot \text{apotema}$

Fórmulas

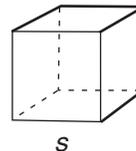
DISTANCIA ENTRE DOS PUNTOS: $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$
PUNTO MEDIO ENTRE DOS PUNTOS: $\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$
PENDIENTE: $m = \frac{y_2 - y_1}{x_2 - x_1}$
FÓRMULA DE INTERCEPCIÓN EN PENDIENTE: $y = mx + b$
FÓRMULA DE PUNTO EN UNA PENDIENTE: $y - y_1 = m(x - x_1)$

Rectángulo



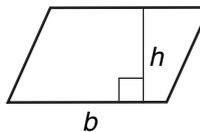
$\text{Área} = lw$
 $\text{Perímetro} = 2l + 2w$

Cubo



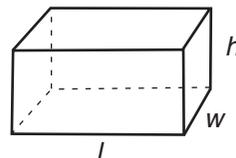
$\text{Volumen} = s^3$
 $\text{Área de superficie} = 6s^2$

Paralelogramo



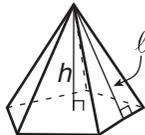
$\text{Área} = bh$

Prisma rectangular



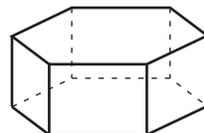
$\text{Volumen} = lwh$
 $\text{Área de superficie} = 2wl + 2lh + 2wh$

Pirámide recta



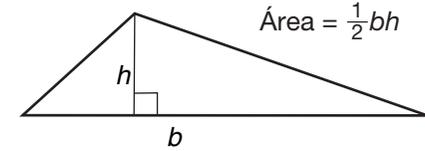
$\text{Volumen} = \frac{1}{3} \times \text{área de la base} \times h$
 $\text{Área de superficie} = \text{área de la base} + \text{áreas de las caras}$

Prisma recto



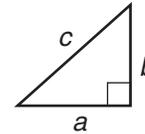
$\text{Volumen} = \text{área de la base} \times h$
 $\text{Área de superficie} = \text{áreas de las bases} + \text{áreas de las caras}$

Triángulo



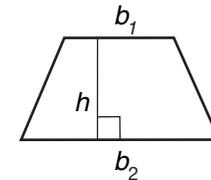
$\text{Área} = \frac{1}{2}bh$

Teorema de Pitágoras



$a^2 + b^2 = c^2$

Trapezio



$\text{Área} = \frac{1}{2}h(b_1 + b_2)$

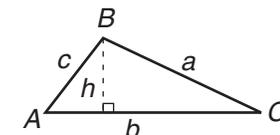
Formulas de trigonometría



$\text{sen } \theta = \frac{\text{lado opuesto}}{\text{hipotenusa}}$

$\text{cos } \theta = \frac{\text{lado adyacente}}{\text{hipotenusa}}$

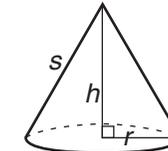
$\text{tan } \theta = \frac{\text{lado opuesto}}{\text{lado adyacente}}$



Ley del seno: $\frac{a}{\text{sen } A} = \frac{b}{\text{sen } B} = \frac{c}{\text{sen } C}$

Ley del coseno: $b^2 = a^2 + c^2 - 2ac(\text{cos } B)$

Cono



$\text{Volumen} = \frac{1}{3}\pi r^2 h$

$\text{Área de superficie} = \pi r^2 + \pi r s$